

What is claimed:

1. A honeycomb comprising:  
a plurality of parallel cells defined by intersecting internal walls, and arranged in horizontal and vertical rows at and between opposing ends of the honeycomb body,  
an outer peripheral wall surrounding the cells, and further being interconnected to the internal walls,  
wherein the cells are divided into a first region including a portion of the cells adjacent the outer peripheral wall, and a second region including remaining cells, wherein the cells in the first region have a wall thickness that is continuously increased along an axis extending to the outer peripheral wall, and,  
wherein fillets are formed at least at intersections between the interior walls in the first region of cells, the fillets having a radius,  
wherein the radius of the fillets is continuously increased along an axis extending to the outer peripheral wall.
2. The honeycomb of claim 1 wherein the first region of cells includes at least twenty rows of cells adjacent the outer peripheral wall.
3. The honeycomb of claim 2 wherein the first region of cells includes at least ten rows of cells adjacent the outer peripheral wall.
4. The honeycomb of claim 3 wherein the first region of cells includes at least seven rows of cells adjacent the outer peripheral wall.
5. The honeycomb of claim 4 wherein the first region of cells includes at least four rows of cells adjacent the outer peripheral wall.

6. The honeycomb of claim 1 wherein the walls of cells in the second region have a thickness of  $\leq 0.15$  mm.
7. The honeycomb of claim 6 wherein the walls of cells in the second region have a thickness of  $\leq 0.10$  mm.
8. The honeycomb of claim 6 wherein the walls of cells in the first region have a thickness that is 1.01-4 times the wall thickness of the cells in the second region.
9. The honeycomb of claim 1 wherein the fillets have a radius of 0.025-0.400 mm.
10. The honeycomb of claim 1 wherein the fillets in the first region of cells are of the type selected from the group consisting of concave, convex and combinations thereof .
11. The honeycomb of claim 10 wherein the fillets are concave.
12. The honeycomb of claim 10 wherein the fillets are convex.
13. The honeycomb of claim 10 wherein the fillets are both concave and convex.
14. An extrusion die for fabricating the honeycomb of claim 1, the die comprising:
  - an inlet face;
  - a discharge face opposite the inlet face;
  - a plurality of feed holes extending from the inlet face into the die body;
  - an intersecting array of discharge slots extending into the die body from the discharge face to connect the feed holes at feed hole/slot intersections within the die, the slots being formed by a plurality of pins;
  - wherein a plurality of discharge slots near an outer periphery of the die have a width that is continuously increased along an axis extending to the outer periphery of the die;
  - wherein a plurality of pins near the outer periphery of the die have rounded corners.

15. A method of making the honeycomb extrusion die of claim 14, comprising:
- providing a die body incorporating an inlet face, a discharge face opposite the inlet face, a plurality of feed holes extending from the inlet face into the body, and an intersecting array of discharge slots extending into the body from the discharge face to connect with the feed holes at feed hole intersection within the die, the intersecting array of discharge slots being formed by side surface of an array of pins;
  - providing an electrical discharge electrode having a plurality of openings formed by a network of intersecting webs, the intersecting webs having a continuously increasing width in an axial direction to an outer periphery of the electrode, the intersecting webs having rounded corners at intersections thereof;
  - bringing the electrical discharge electrode into contact with the array of pins on the discharge face of the die body; and,
  - reducing a plurality of pins in a region adjacent an outer periphery of the die, the reducing occurring symmetrically on all side surfaces of the pins, and while concurrently rounding the corners of the pins thereof, by plunge electrical discharge machining,
  - whereby there is formed a die comprising an array of pins wherein a plurality thereof have rounded corners and form discharge slots having a width that is continuously increased along an axis extending to the outer periphery of the die.